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**Before the
Federal Communications Commission
Washington, D. C. 20554**

In the Matter of:

Proposed Amendment of Part 97
of the Commission's Rules
Governing the Amateur Radio
Service to Facilitate Spread
Spectrum Communications

RM-8737

DOCKET FILE COPY ORIGINAL

To: Federal Communications Commission

The San Bernardino Microwave Society,

Statement in Opposition to:

the American Radio Relay League,

Petition for Rule Making

From: Richard Kolbly,
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February 20, 1996

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By the Membership:

Introduction

1. On December 12, 1995, the American Radio Relay League (ARRL) filed, with the Federal Communications Commission (FCC), a petition for rule making to amend FCC Part 97 rules to allow the use of Spread Spectrum (SS) modulation in the Amateur Radio Service.

2. The membership of the San Bernardino Microwave Society opposes this petition for the following reasons:

- a) The petition arguments appear to be based on defective scientific methods.
- b) The petition does not clearly show how the users of SS will be required to protect incumbent band users.
- c) The petition does not clearly establish band segments for SS communications to operate without causing interference to other band users in densely populated Amateur bands in urban areas.
- d) The petition does not recognize band planning and associated band use parameters which have been previously agreed to by incumbent users.
- e) The petition is not clear as to how instances of interference between band users will be resolved.
- f) The petition does not establish a uniform method of CW identification of SS signals.

g) The petition does not adequately define "Spread Spectrum", and wishes for a broad brush to be used when defining this modulation method.

Background

3. The San Bernardino Microwave Society (SBMS) is a non-profit organization "dedicated to the advancement of communications above 1 GHz". Our membership primarily consists of college-educated professionals employed in the high-tek electronics and defense industries. The Society was formed forty years ago to promote activity within the Amateur Radio Service, specifically on the microwave bands¹. Considering our long history of activity in the Amateur microwave bands, our membership felt that our comments had relevance to the future uses of these bands.

4. It must be clearly understood that the SBMS wishes to promote and expand the use of the Amateur microwave bands. Our membership currently includes active Amateurs in the weak signal (including terrestrial and earth-moon-earth), repeater, point to point links and television. Our membership also includes representatives to the local spectrum management/planning group, SCRRBA. We have actively participated in the regional planning of all the Amateur microwave bands for which such plans exist. Additionally, over the last forty-years, we have commented on numerous rule making issues affecting the Amateur microwave bands.

Statements in Support of Our Position

5. The SBMS is compelled to comment on the ARRL petition for rule making for the following reason:

The ARRL states in its petition that "there have not been, in the League's experience, any established instances of actual interference to narrow-band amateur communications from spread-spectrum (SS) communications"

6. What does this mean and why is it contained in this proposed rule change? The statement is not supported by any scientific/technical data, nor is a source for such data referenced. Under the charter of Amateur radio contained within the FCC rules, we are required by section 97.101 (a) to:

In all respects not specifically covered by FCC Rules each amateur station must be operated in accordance with good engineering and good amateur practice.

¹ Additional information about the San Bernardino Microwave Society is contained in an article within the pages of QST magazine, March 1995 issue, pages 46 through 50.

7. Conclusions drawn from testing of new communications modulation techniques *which were not widely disclosed before, during and after such tests occurred*, are not consistent with good scientific, *good engineering or good amateur practice*, and do not contain meaningful data. Sharing in advance test dates, test parameters and controls is the only way to insure that the results of such testing contain scientifically-meaningful data; data which benefits the Amateur community at-large and data that we can all be proud of.

8. It appears that a majority of the proposed rule changes requested by the ARRL have little or no actual relationship to implied testing, so we will oppose any rule change that does not contain the following safeguards. Additionally, the SBMS hopes that the FCC staff is well aware of the crowding which exists in many of the Amateur bands, particularly the lower microwave bands. We would like the FCC to consider the following reasonable limitations be placed on any new or expanded use of Amateur SS (just as they already apply to most other emissions):

a) Use of SS should be limited to portions of Amateur bands as prescribed by local frequency coordination practices. If frequency coordination of SS stations is not required under local band plans, operation of such stations must still be in accordance with established local plans or practices.

b) Users of SS, conforming to a) above, must take all reasonable precautions necessary to prevent interference to existing incumbent band users without regard to either stations transmitter power, beamwidth, elevation or ERP. This is especially critical in the weak-signal portions of the bands where current operation at or in the noise floor is commonplace but applies to other existing users as well.

c) A standard for transmitter identification must be established so that any interested parties can easily find the source of a transmission.

d) Definitions of general categories of SS emissions need to be established. Narrowband digital voice systems should not be forced into the same category as a SS system transporting information at megabyte data rates. Again, these decisions for band usage must be made at the local level.

Conclusion


9. It should not be interpreted from this discussion that the SBMS is against SS communications. There are less crowded Amateur microwave bands, particularly the higher frequency bands, where space exists for a variety of SS emission types. In fact, we welcome the new modes to help promote the future use of the Amateur microwave bands. The SBMS stands ready to serve all Amateurs wishing to construct and operate stations in these microwave bands.

10. Limitations similar to those requested in a) above already exist in the Amateur rules, with portions of many bands set aside for CW, Voice, Repeaters, etc. To simplify the rule-making procedure and allow for integration into long-established band planning currently in-place throughout most of America, we ask that band segments and coordination requirements be decided on a local basis by the locally-recognized coordinator.

11. The future of Amateur radio communication modes may well lie in the various forms of digital communications. Everything should be done to help promote this type of Amateur activity. As in the past, however, the newer mode must establish itself as technically feasible, especially in today's highly crowded Amateur bands. A systematic and controlled integration of SS into mainstream Amateur radio combined with widespread education will insure that this new mode is taken seriously.

12. The ARRL petition, in its current form, would create chaos in the Amateur bands if implemented as written. While Amateur development of SS communications is needed, it can not simply be thrown into the bands on top of well-established incumbent band users. We must therefore respectfully oppose this petition for rule making until the protections outlined above are included.

For the Membership,

A handwritten signature in black ink, appearing to read "David E. Laag", written over the printed name.

David E. Laag, President

San Bernardino Microwave Society